

CLAIMS

It is claimed:

1. An electronic control with a power supply that isolates the control
5 voltages from the ac source, said control having a plurality of connections
between digital nodes and ac nodes, said connections being made through passive
components, the subsequent signals on digital nodes being compared to determine
the state of one or more ac paths.

2. The control in accordance with claim 1 wherein said determined state of
10 at least one of said ac paths indicates whether a switching device is open or
closed.

3. The control in accordance with claim 1 wherein said determined state of
at least one of said ac paths indicates whether a functional load component is
present.

4. The control in accordance with claim 1 wherein at least one of said
15 signals is used to determine zero crossings.

5. The control in accordance with claim 1 wherein said passive
components limit the current from said ac source through the operator to a safe
level should said operator contact any control node.

20 6. An electronic control with a power supply that isolates the control
voltages from the ac source, said control having a plurality of connections
between digital nodes and ac nodes, said connections being made through non-
reactive passive components, the subsequent signals on digital nodes being
compared to determine the state one or more ac paths.

25 7. The control in accordance with claim 6 wherein said determined state of
at least one of said ac paths indicates whether a switching devices is open or
closed.

8. The control in accordance with claim 6 wherein said determined state of
30 at least one of said ac paths indicates whether a functional load component is
present.

9. The control in accordance with claim 6 wherein at least one of said signals is used to determine zero crossings.

10. The control in accordance with claim 6 wherein said passive components limit the current from said ac source through the operator to a safe level should said operator contact any control node.

11. An appliance electronic control with a power supply that isolates the control voltages from the ac source, said control having a plurality of connections between digital nodes and ac nodes, said connections being made through passive components, the subsequent signals on said digital nodes being compared to determine the state of one or more ac paths.

12. The control in accordance with claim 11 wherein said determined state of at least one of said ac paths indicates whether a switching devices is open or closed.

13. The control in accordance with claim 11 wherein said determined state of at least one of said ac paths indicates whether a functional load component is present.

14. The control in accordance with claim 11 wherein at least one of said signals is used to determine zero crossings.

15. The control in accordance with claim 11 wherein said passive components limit the current from said ac source through the operator to a safe level should said operator contact any control node.

16. The control in accordance with claim 11 wherein said passive components are non-reactive components.

17. The control in accordance with claim 16 wherein said determined state of at least one of said ac paths indicates whether a switching devices is open or closed.

18. The control in accordance with claim 16 wherein said determined state of at least one of said ac paths indicates whether a functional load component is present.

19. The control in accordance with claim 16 wherein at least one of said signals is used to determine zero crossings.

20. The control in accordance with claim 16 wherein said passive components limit the current from said ac source through the operator to a safe
5 level should said operator contact any control node.